

c.) Amendments to the Claims.

Please amend claims 53, 54, 102 and 103 as follows:

Claims 1-22. (previously canceled).

Claim 23. (previously added) A composite comprising nanotubes that have an aspect ratio which provides said composite with electromagnetic shielding.

Claim 24. (previously added) The composite of claim 23 wherein the aspect ratio effective for electromagnetic shielding is selected from the group consisting of at least 100:1, at least 500:1 and at least 1,000:1.

Claim 25. (previously added) The composite of claim 23 wherein nanotubes are in contact with each other along their longitudinal axes such that the nanotubes that are in contact have an effective length longer than a single nanotube.

Claim 26. (previously added) The composite of claim 23 wherein the nanotubes are dispersed homogeneously in at least a portion of said composite.

Claim 27. (previously added) The composite of claim 23 wherein the nanotubes are dispersed in a gradient fashion in at least a portion of said composite.

Claim 28. (previously added) The composite of claim 23 wherein the nanotubes are dispersed on at least one surface of an object.

Claim 29. (previously added) The composite of claim 23 wherein the nanotubes are selected from the group consisting of straight and bent multi-wall nanotubes, straight and bent single-wall nanotubes, by-products of nanotube preparations, and combinations thereof.

Claim 30. (previously added) The composite of claim 23 wherein the nanotubes comprise about 0.001 to about 15.0 weight percent of the composite.

Claim 31. (previously added) The composite of claim 23 wherein the nanotubes comprise about 0.01 to about 5.0 weight percent of the composite.

Claim 32. (previously added) The composite of claim 23 wherein the nanotubes comprise from about 0.1 to about 1.5 weight percent of the composite.

Claim 33. (previously added) The composite of claim 23 wherein the nanotubes are comprised of carbon, boron nitride, SiC or combinations thereof.

Claim 34. (previously added) The composite of claim 23 further comprising a polymeric material.

Claim 35. (previously added) The composite of claim 34 wherein the polymeric material is selected from the group consisting of a thermoplastic polymer, a thermoset polymer, a non-carbonizable polymer, an elastomer, a natural polymer, and combinations thereof.

Claim 36. (previously added) The composite of claim 35 wherein the natural polymer is selected from the group consisting of cellulose, gelatin, chitin, polypeptides, polysaccharides, polymeric materials derived from plants, animals, and microorganisms, and combinations thereof.

Claim 37. (previously added) The composite of claim 34 wherein the polymeric material is selected from the group consisting of polyethylene, polypropylene, polyvinyl chloride, styrenic, polyurethane, polyimide, polycarbonate, polyethylene terephthalate, acrylics, phenolics, unsaturated polyesters, and combinations thereof.

Claim 38. (previously added) The composite of claim 35 wherein the polymeric material has a structure is selected from the group consisting of crystalline, partially crystalline, amorphous, crosslinked, fiber, cylinder, plaque, film, sheet, extrusion shape, and combinations thereof.

Claim 39. (previously added) The composite of claim 23 wherein electromagnetic shielding is enhanced by alignment of the nanotubes.

Claim 40. (previously added) The composite of claim 39 wherein alignment occurs by application of a shearing force.

Claim 41. (previously added) The composite of claim 40 wherein the shearing force is selected from the group consisting of an elongation force, an extrusion force, an injection force, a stretching force, and combinations thereof.

Claim 42. (previously added) A composite comprising nanotubes that are substantially not in contact with each other, other than along their longitudinal areas.

Claim 43. (previously added) The composite of claim 42 wherein the nanotubes are not bonded to each other.

Claim 44. (previously added) A composite comprising nanotubes effectively oriented to absorb electromagnetic radiation.

Claim 45. (previously added) The composite of claim 44 wherein absorption of electromagnetic radiation is enhanced by alignment of the nanotubes

Claim 46. (previously added) The composite of claim 45 wherein alignment occurs by application of a shearing force.

Claim 47. (previously added) A composite comprising nanotubes effectively oriented for absorbing electromagnetic radiation wherein said composite generates heat upon exposure to said electromagnetic radiation.

Claim 48. (previously added) The composite of claim 47 wherein the electromagnetic radiation is selected from the group consisting of radio frequencies, microwave radiation,

radiation at 20 KHz, radiation at 0.4 MHz, radiation at 15 MHz, radiation at 0.2 GHz, radiation at 1.5 GHz, and combinations thereof.

Claim 49. (previously added) A composite comprising nanotubes wherein application of a shearing force to the nanotubes enhances shielding or absorption of electromagnetic radiation.

Claims 50 and 51. (previously canceled).

Claim 52. (previously added) A composite comprising nanotubes effectively oriented to provide low radar observability to an object shielded with said composite.

Claim 53. (currently amended) The composite of claim 52 wherein low radar observability comprises transmitted radiation levels of ~~less than about~~ 0.001% or less.

Claim 54. (currently amended) The composite of claim 52 wherein low radar observability comprises reflected radiation levels of ~~less than about~~ 16% or less.

Claim 55. (withdrawn) A device comprising the composite of claim 52 on a surface.

Claim 56. (withdrawn) The device of claim 55 wherein the composite has a thickness on said surface of less than 1 mm.

Claim 57. (withdrawn) A composite comprising a plurality of layers wherein one or more layers contain nanotubes effective for a desired range of electromagnetic shielding.

Claim 58. (withdrawn) The composite of claim 57 wherein one or more layers are essentially free of nanotubes.

Claim 59. (withdrawn) The composite of claim 57 wherein the layers have a variable thickness.

Claim 60. (withdrawn) The composite of claim 57 wherein the one or more layers have a gradient of nanotube concentration.

Claim 61. (withdrawn) The composite of claim 57 wherein the layers have the same thickness.

Claim 62. (withdrawn) The composite of claim 57 wherein the desired range of electromagnetic shielding for each layer is between about 10^3 and 10^{17} Hz.

Claim 63. (withdrawn) The composite of claim 57 wherein the electromagnetic shielding of at least one layer is effective at 20 KHz.

Claim 64. (withdrawn) The composite of claim 57 wherein the electromagnetic shielding of at least one layer is effective at 0.4 MHz.

Claim 65. (withdrawn) The composite of claim 57 wherein the electromagnetic shielding of at least one layer is effective at 15 MHz.

Claim 66. (withdrawn) The composite of claim 57 wherein the electromagnetic shielding of at least one layer is effective at 0.2 GHz.

Claim 67. (withdrawn) The composite of claim 57 wherein the electromagnetic shielding of at least one layer is effective at 1.5 GHz.

Claim 68. (withdrawn) A material comprising a plurality of layers wherein one or more layers comprise nanotubes that provide electromagnetic shielding to said material.

Claim 69. (withdrawn) The material of claim 68 wherein the one or more layers containing nanotubes alternate with layers that are essentially free of nanotubes.

Claim 70. (withdrawn) The material of claim 68 wherein the layers are of the same thickness.

Claim 71. (withdrawn) The material of claim 68 wherein the layers are of variable thickness.

Claim 72. (withdrawn) The material of claim 68 which is selected from the group consisting of electronic equipment, computer equipment, stealth devices, aircraft components, low radar-profile components, devices for navigation, medical devices, circuit boards, microwave susceptors, and combinations thereof.

Claim 73. (withdrawn) A material comprising nanotubes effectively oriented to impart an electromagnetic shielding property to said material.

Claim 74. (withdrawn) The material of claim 73 wherein the electromagnetic shielding property is selected from the group consisting of an insulative property, low-bulk conductivity, macroscopic low conductivity, anisotropically low conductivity in at least one dimension, a low radar profile, a low reflectance to electromagnetic radiation, a high absorptiveness to electromagnetic radiation, energy absorbing, and combinations thereof.

Claim 75. (withdrawn) The material of claim 73 wherein the nanotubes are disposed on a surface.

Claim 76. (previously added) A composite comprising nanotubes that have an aspect ratio which provides said composite with electromagnetic shielding, wherein the nanotubes are straight and bent single-wall carbon nanotubes.

Claim 77. (previously added) The composite of claim 76 wherein the aspect ratio effective for electromagnetic shielding is selected from the group consisting of at least 100:1, at least 500:1 and at least 1,000:1.

Claim 78. (previously added) The composite of claim 76 wherein nanotubes are in contact with each other along their longitudinal axes such that the nanotubes that are in contact have an effective length longer than a single nanotube.

Claim 79. (previously added) The composite of claim 76 wherein the nanotubes are dispersed homogenously in at least a portion of said composite.

Claim 80. (previously added) The composite of claim 76 wherein the nanotubes are dispersed in a gradient fashion in at least a portion of said composite.

Claim 81. (previously added) The composite of claim 76 wherein the nanotubes are dispersed on at least one surface of an object.

Claim 82. (previously added) The composite of claim 76 wherein the nanotubes comprise about 0.001 to about 15.0 weight percent of the composite.

Claim 83. (previously added) The composite of claim 76 wherein the nanotubes comprise about 0.01 to about 5.0 weight percent of the composite.

Claim 84. (previously added) The composite of claim 76 wherein the nanotubes comprise from about 0.1 to about 1.5 weight percent of the composite.

Claim 85. (previously added) The composite of claim 76 further comprising a polymeric material.

Claim 86. (previously added) The composite of claim 85 wherein the polymeric material is selected from the group consisting of a thermoplastic polymer, a thermoset polymer, a non-carbonizable polymer, an elastomer, a natural polymer, and combinations thereof.

Claim 87. (previously added) The composite of claim 86 wherein the natural polymer is selected from the group consisting of cellulose, gelatin, chitin, polypeptides, polysaccharides, polymeric materials derived from plants, animals, and microorganisms, and combinations thereof.

Claim 88. (previously added) The composite of claim 85 wherein the polymeric material is selected from the group consisting of polyethylene, polypropylene, polyvinyl chloride, styrenic, polyurethane, polyimide, polycarbonate, polyethylene terephthalate, acrylics, phenolics, unsaturated polyesters, and combinations thereof.

Claim 89. (previously added) The composite of claim 86 wherein the polymeric material has a structure is selected from the group consisting of crystalline, partially crystalline, amorphous, crosslinked, fiber, cylinder, plaque, film, sheet, extrusion shape, and combinations thereof.

Claim 90. (previously added) The composite of claim 76 wherein electromagnetic shielding is enhanced by alignment of the nanotubes.

Claim 91. (previously added) The composite of claim 90 wherein alignment occurs by application of a shearing force.

Claim 92. (previously added) The composite of claim 91 wherein the shearing force is selected from the group consisting of an elongation force, an extrusion force, an injection force, a stretching force, and combinations thereof.

Claim 93. (previously added) A composite comprising straight and bent single-wall carbon nanotubes that are substantially not in contact with each other, other than along their longitudinal areas.

Claim 94. (previously added) The composite of claim 93 wherein the nanotubes are not bonded to each other.

Claim 95. (previously added) A composite comprising straight and bent single-wall carbon nanotubes effectively oriented to absorb electromagnetic radiation.

Claim 96. (previously added) The composite of claim 95 wherein absorption of electromagnetic radiation is enhanced by alignment of the nanotubes

Claim 97. (previously added) The composite of claim 96 wherein alignment occurs by application of a shearing force.

Claim 98. (previously added) A composite comprising straight and bent single-wall carbon nanotubes effectively oriented for absorbing electromagnetic radiation wherein said composite generates heat upon exposure to said electromagnetic radiation.

Claim 99. (previously added) The composite of claim 98 wherein the electromagnetic radiation is selected from the group consisting of radio frequencies, microwave radiation, radiation at 20 KHz, radiation at 0.4 MHz, radiation at 15 MHz, radiation at 0.2 GHz, radiation at 1.5 GHz, and combinations thereof.

Claim 100. (previously added) A composite comprising straight and bent single-wall carbon nanotubes wherein application of a shearing force to the nanotubes enhances shielding or absorption of electromagnetic radiation.

Claim 101. (previously added) A composite comprising straight and bent single-wall carbon nanotubes effectively oriented to provide low radar observability to an object shielded with said composite.

Claim 102. (currently amended) The composite of claim 101 wherein low radar observability comprises transmitted radiation levels of ~~less than about~~ 0.001% or less.

Claim 103. (currently amended) The composite of claim 101 wherein low radar observability comprises reflected radiation levels of ~~less than about~~ 16% or less.